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Complete if Known Substitute for form 1449A/B/PTO Application Number 10/808,267-Conf. #4786 INFORMATION DISCLOSURE March 11, 2004 Filing Date STATEMENT BY APPLICANT First Named Inventor Jonathon M Schuler Art Unit 2621 (Use as many sheets as necessary) Examiner Name P. L. Edwards

U.S. PATENT DOCUMENTS							
Examiner Initials*	Cite No.¹	Document Number  Number-Kind Code <sup>2</sup> ( if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		

	FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No.1	Foreign Patent Document  Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Publication Date MM-OD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T°			

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	NON PATENT LITERATURE DOCUMENTS						
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K		HUANG, T. S. and TSAI, R.Y., "Multiple frame image restoration and registration", Advances in Computer Vision and Image Processing, vol. 1, JAI Press, 1984					
14		TEKALP, A. M., Digital Video Processing, pages 81-86 & table of contents, 1995 Prentice Hall					
<i>[</i> <		RICHARDSON, W.H., "Baysian-Based Iterative Method of Image Restoration", J. Opt. Soc. Am., vol. 62, no. 1, page 55-59 ( 1972)					
K		DIXON, D.D. et al., "Pixon-based Deconvolution", Astronomy and Astrophysics Supplement Series, Vol. 120, pages 683-686 (1996)					
K		JAIN, A.K., Fundamentals of Digital Image Processing, Chapter 8 and table of contents, pages 267-341, Prentice Hall 1989					
R		J. M. SCHULER, J. G. HOWARD, P. R. WARREN, and D. A. SCRIBNER, "TARID-based adaptive nonuniformity correction", Proc. SPIE Int. Soc. Opt. Eng., Volume 4719, page 240-246, 2002					
K		J. M. SCHULER, J. G. HOWARD, P. R. WARREN, and D. A. SCRIBNER, "TARID-based image super-resolution", Proc. SPIE Int. Soc. Opt. Eng. 4719, 247-254 (2002)					
K		J. M. Schuler, J. G. HOWARD, P. R. WARREN, and D. A. SCRIBNER, "Scene-adaptive nonuniformity correction using TARID-composite Image prediction", Proc. SPIE Int. Soc. Opt. Eng. 4671, 888-894 (2002)					

Examiner	Date	
Signature	Considered 02-03-2	006

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449A/B/PTO				Complete if Known		
		•		Application Number	10/808,267-Conf. #4786	
IN	FORMATIC	N DIS	CLOSURE	Filing Date	March 11, 2004	
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				Art Unit	2621	
	(Use as many sheets as necessary)			Examiner Name	P. L. Edwards	
Sheet	2	of	3	Attorney Docket Number	84655US1	

J. M. SCHULER, J. G. HOWARD, P.R. WARREN, and D. A. SCRIBNER, "Resolution enhancement through TARID processing", Proc. SPIE Int. Soc. Opt. Eng. 4671, 872-876. (2002)J. M. SCHULER, J. G. HOWARD, P. R. WARREN, and D. A. SCRIBNER, "Robust tie-point registration of disparate imaging sensors by matching optical flow" Proc. SPIE Int. Soc. Opt. Eng., Volume 4671, pages 775-783 (2002) J. M. SCHULER, J. G. HOWARD, D.A. SCRIBNER, P. R. Warren, R. B. KLEIN, M.P. SATYSHUR, and M. R. KRUER, "Resolution enhancement through a temporal accumulation of registered video", Proc. SPIE Int. Soc. Opt. Eng., Volume 4372, pages 137-142 (2001) J.M. SCHULER, J. G. HOWARD, D.A. SCRIBNER, P.R. Warren, R. B. KLEIN, Michael P. SATYSHUR, and M.R. KRUER, "Analytic registration of spatially and spectrally disparate colocated imaging sensors achieved by matching optical flow", Proc. SPIE Int. Soc. Opt. Eng., Vol. 4381, pages 265-274 (2001) J.M. SCHULER, J. G. HOWARD, D.A. SCRIBNER, P.R. Warren, R. B. KLEIN, M. P. SATYSHUR, and M.R. KRUER, "Multiband E/O color fusion with consideration of noise and registration", Proc. SPIE Int. Soc. Opt. Eng. 4029, pages 32-40 (2000) D.A. SCRIBNER, J.M. SCHULER, P.R. WARREN, J. G. HOWARD, and M. R. KRUER. "Image preprocessing for the infrared" Proc. SPIE Int. Soc. Opt. Eng., Vol. 4028, pages 222-233 (2000) J. G. HOWARD, P. R. WARREN, R. KLEIN, J.M. SCHULER, M. P. Satyshur, D. A. Scribner, and M. R. Kruer, "Real-time color fusion of E/O sensors with PC-based COTS hardware", Proc. SPIE Int. Soc. Opt. Eng., Vol. 4029, pages 41-48 (2000)

- J. M. SCHULER, D. A. SCRIBNER, and M. R. KRUER, "Alias reduction and resolution enhancement by a temporal accumulation of registered data from focal plane array sensors", Proc. SPIE Int. Soc. Opt. Eng., Vol. 4041, pages 94-102 (2000)
- J. M. SCHULER and D.A. SCRIBNER, "Increasing spatial resolution through temporal supersampling of digital video", Opt. Eng., Vol. 38, Issue 5, pages 801-805 (1999)
- D.A. SCRIBNER, J.M. Schuler, P.R. Warren, M.P. Satyshur, and M. R. Kruer, "Infrared color vision: separating objects from backgrounds" Proc. SPIE Int. Soc. Opt. Eng., Vol. 3379, pages 2-13 (1998)
- R.R. MAYER, J. WATERMAN, J. SCHULER, and D. SCRIBNER, "Spectral optimization studies and schemes to enhance target detection and display for a three-band staring LWIR sensor" Proc. SPIE Int. Soc. Opt. Eng., Vol. 5159, pages 20-31 (2003)

Examiner	Agranda	Date	
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Signature		Considered	0 2 - 03 - 2006
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PTO/SB/08a/b (07-05)
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INF	ORMATI	ON DIS	CLOSURE	Filing Date	March 11, 2004
STATEMENT BY APPLICANT			PPLICANT	First Named Inventor	Jonathon M Schuler
				Art Unit	2621
	(Use as many sheets as necessary)			Examiner Name	P. L. Edwards
Sheet	3	of	3	Attorney Docket Number	84655US1

PL		R. G. DRIGGERS, K. KRAPELS, S.MURRILL, S.YOUNG, M.THIELKE, and J. SCHULER, "Superresolution performance for undersampled imagers", Opt. Eng., Vol. 44, pages 014002-1 -14002-9 (2005)	
K		K.A. KRAPELS, R.G. DRIGGERS, S. MURRILL, J. M. SCHULER, M. THIELKE, and S. S. YOUNG, "Superresolution performance for undersampled imagers", Proc. SPIE Int. Soc. Opt. Eng., Vol. 5407, pages 139-149 (2004)	
R K		KONDI, L. P., Scribner D.A. and Schuler, J. M., "Comparison of digital image resolution enhancement techniques", Proc. SPIE Int. Soc. Opt. Eng., Vol. 4719, pages 220-229 (2002)	
K.		JAIN, D. "Superresolution using Papoulis-Gerchberg Algorithm", [online], [retrieved on 2005-12-15], retrieved from the internet < URL: http://www.stanford.edu/class/ee392j/student_projects_2004.html>	
K		Schuler, J.M., Scribner, D.A., "Dynamic Sampling, Resolution Enhancement, and Super Resolution", in Analysis of Sampled Image Systems, Tutorial Texts in Optical Engineering; Volume TT39; editors: Vollmerhausen, R.H., Driggers, R.G.; series editor:Donald O'Shea; SPIE Press, pages 125-138, (2000)	
	[		L !

<sup>&#</sup>x27;EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
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